



PREVENTION OF HOT WEATHER INJURIES

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WE BUILD INFANTRYMEN



TRADOC--WHERE TOMORROW'S VICTORIES BEGIN!

Purpose

To share information based on
review of Heat Injury
Prevention Procedures in the
Infantry Training Brigade



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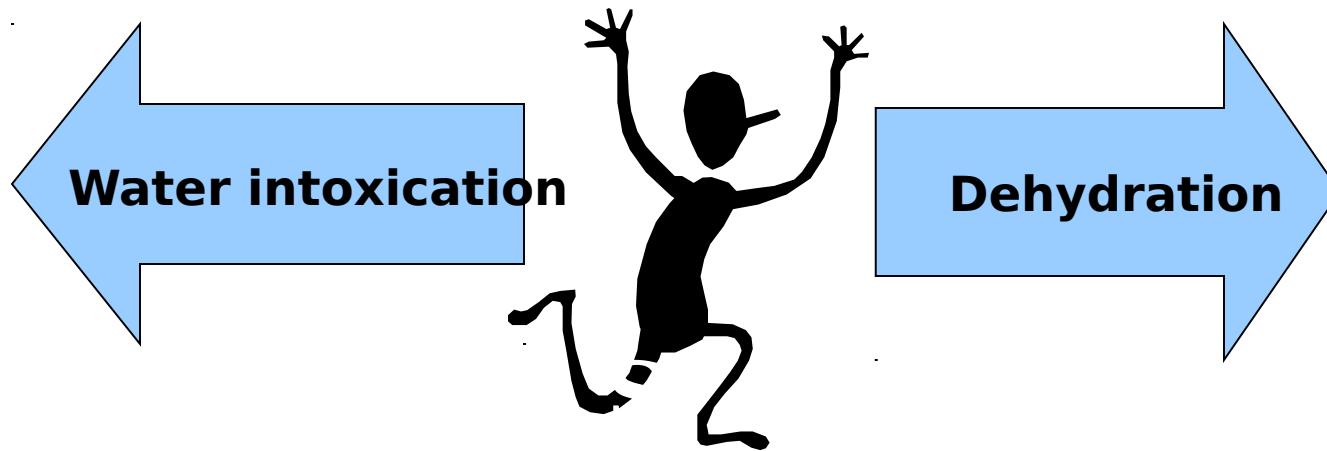
Heat Injury Prevention Project

- **Educate the Leadership - Enhance understanding “The Why”!**
 - How the Body Works (Dehydration vs Overhydration)
 - High Risk Soldiers
- **Review/Revise Policy and Unit Procedures**
 - Daily Risk Assessment - H.E.A.T. T.
 - Risk Management Worksheets
 - FB 7-R Heat Injury Cards
 - Water Consumption Tracking - Ogden Cords
- **Enhance Diagnosis & Treatment Capability**
 - Thermoscans - Core Body Temperature
 - Evacuation Criteria - CLS at collection point
 - Ice Sheet Cooling



OUR CHALLENGE

Maintain a **balanced state (euhydrated)** in a **inexperienced & non acclimatized soldier** while conducting training IAW a **POI** that doesn't have a lot of **flexibility built in for training during Heat Category conditions.**



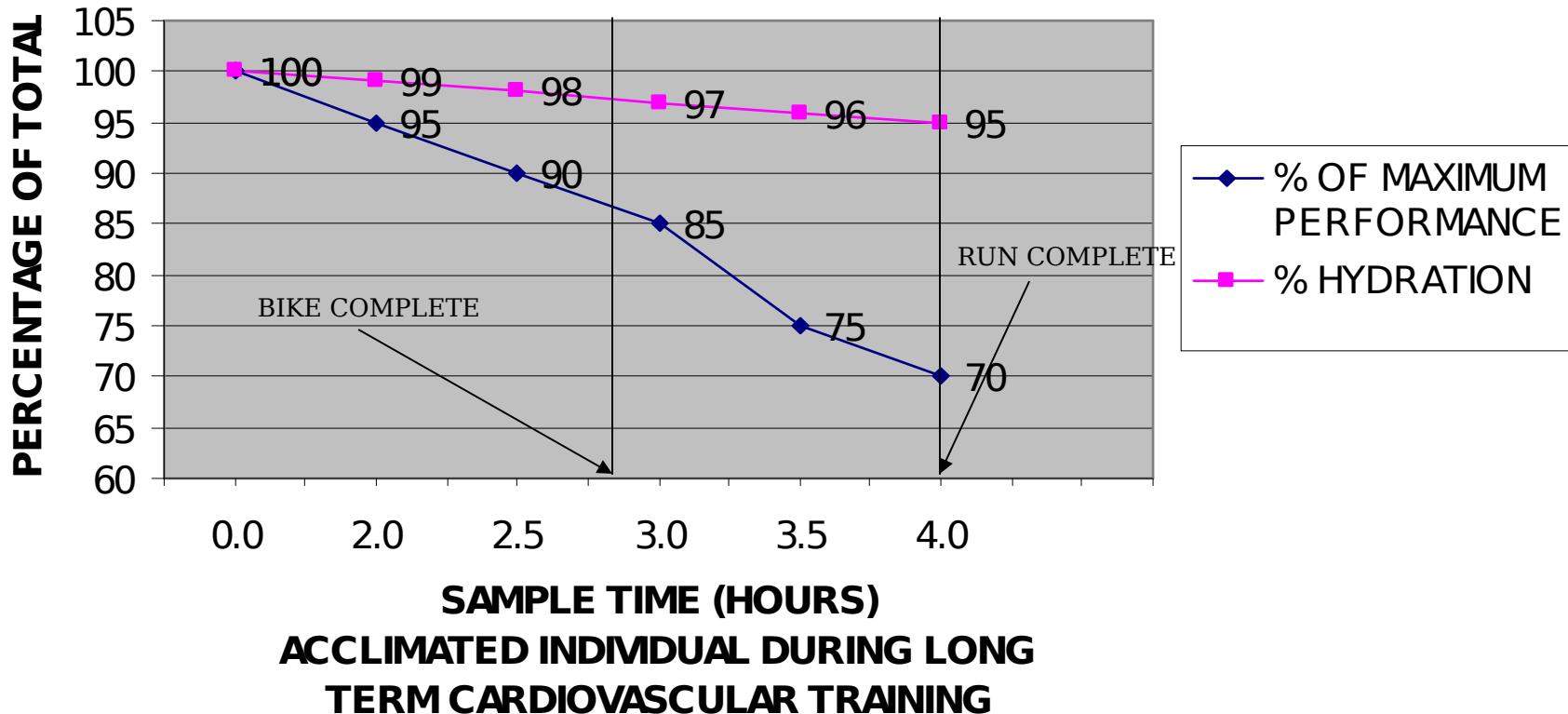
Dehydration

- Impairs physical and mental performance
- Impairs ability of body to cool itself
- Raises core temperature
- Increases heat stroke risk



DEHYDRATION AND PERFORMANCE OVER TIME

PHYSICAL PERFORMANCE AND SAMPLE DEHYDRATION OVER TIME



Overhydration

- **Dilutes electrolytes in blood**
- **Stomach problems**
- **Confusion**
- **Brain swelling**
- **Seizures**
- **Death**



HYDRATION-IN

- Regulated Fluid Intake based on Work Intensity & Heat Category
 - Right liquids at the right temperature (Water, Gatorade, Powerade)
 - Right mixture/concentration
 - Food - Extended C
 - Ogden cords
- GASTRIC EMPTYING RATE**
- KEY**
-
- 100-200 ml every 10-15 m
- 600 ml optimal volume
- RATE A FUNCTION OF:
- temp of fluid 60°F optimal
 - volume 400-600 ml creates ideal
 - chemical composition: 200-210 ml



Individual Risk Factors

- Run time > 16 min/ 2 miles
- Body mass index > 22
- Medications- antihistamines, decongestants
- Poor overnight cooling
- Sickness
- Sunburn, large skin rash



Daily Risk Assessment

(H.E.A.T.- T.)

“Today’s heat injury is the result of training conducted on the two previous days.”

- **H- heat category- 3 days**
- **E- exertion level- 3 days**
- **A- acclimatization**
- **T- temperature/ rest overnight**

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- **T- Tables- water/work/rest**
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Heat Related Symptoms

Mild

- Cramps in large muscles
- Dark urine
- Decreased performance
- Headache
- Poor concentration

Serious

- Episodes of vomiting
- Unconsciousness
- Mental status changes (combative, lethargic, etc)
- Elevated Core temperature

Overhydration

- Clear urine
- Bloated stomach
- Vomiting
- Confusion



Core temperature

- Ear thermo scanner in CLS bags
- 2 temperature readings
- If core temp > 104- utilize iced sheets while awaiting ambulance



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Treatment Mild Heat Symptoms

- **Soldier does not meet evacuation criteria**
- **Loosen clothing/ remove headgear**
- **Place in shade**
- **Fluids by mouth- 1 canteen/hr X 2**
- **Snack / Electrolyte beverage**



Heat Injury

Evacuation Criteria

- **2 or more episodes of vomiting**
- **Unconsciousness > 1 minute**
- **Mental status changes (combative, lethargic, confusion)**
- **Core temperature > 104 F**
- **Mild symptoms do not improve after 30 Min's**



Treatment Serious Heat Symptoms

- **Call for Evacuation**
- **Rapid Cooling**
 - Undress to briefs
 - Wrap in iced sheets
 - Then loosen sheets and fan
 - Stop cooling when core temp 100 or Soldier is shivering
- **Administer IV after previous 2 tasks**
 - 1/2 Bag Only



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Questions?



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